

## QUARTERLY ACTIVITIES REPORT

### For the Quarter ending 31 December 2023

Earths Energy (ASX:EE1) (Earths Energy or the Company) is pleased to present its Quarterly Activities Report for the December 2023 Quarter.

#### HIGHLIGHTS

- **Earths Energy to advance geothermal projects in South Australia and Queensland after \$6 million capital raise and Project acquisitions**
  - The Company acquired 84% of all the shares in Volt Geothermal Pty Ltd ("Volt") and Within Energy Pty Ltd ("Within"), which hold geothermal exploration projects in South Australia and Queensland, respectively
  - 220.4m Earths Energy shares issued to the vendors of Volt and Within
  - The Company formed a Joint Venture with Volt and Within to advance these geothermal exploration and development projects
- **Earths Energy positioned as an early mover in the Australian geothermal energy industry, with the aim to create a leading renewable energy solution with 24/7 production capability to help achieve Australia's clean energy targets**
  - Geothermal energy is growing globally as a renewable source of consistent base-load power, essential for reducing carbon emissions
  - Earths Energy is an early mover in securing tenure near potential offtakers in Queensland and South Australia
- **Advances in technology, supported by major industry players, aim to unlock significant unexploited geothermal resources**
  - Most geothermal resources have so far not been developed as the industry has historically focussed on hot rocks around the Ring of Fire
  - Recent technological advances such as closed loop systems have demonstrated potential to unlock lower temperature, non permeable reservoirs of geothermal energy
- **Former Beach Energy Managing Director Matt Kay appointed Managing Director**
- **The Company's cash balance at 31 December 2023 was \$6.02m.**
- **The Company expects to recommence trading shortly.**



## Managing Director Matt Kay commented:

*"I am excited that we have created Earths Energy with a successful \$6 million capital raise and the acquisition of material equity interests in both Volt (South Australia) and Within (Queensland)."*

*Geothermal energy provides clean, emission free, 24/7 baseload power and has the potential to be an essential contributor towards Australia's clean energy transition.*

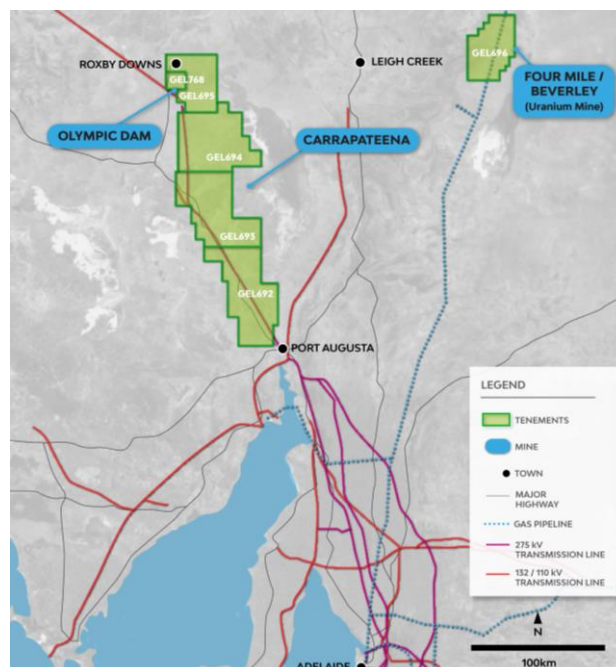
*There has been more than US\$630 million raised in the past 3 years by next generation geothermal startups including the support of major industry participants<sup>1</sup>. Earths Energy is joining this wave of advanced geothermal activity seeking to deliver "geothermal anywhere".*

*Earths Energy will work closely with regulators, governments, and industry to help Australia realise its Net Zero targets."*

## Project Acquisitions completed

The Company acquired 84% of all the shares in Volt Geothermal Pty Ltd ("Volt") and Within Energy Pty Ltd ("Within"), which hold geothermal exploration projects in South Australia and Queensland, respectively.

Earths Energy's geothermal assets in SA are at the nexus of the state's push towards renewable energy, with substantial exploration blocks spanning 12,035 km<sup>2</sup> in prime locations (See Figure 1). These blocks are strategically situated along major transmission lines and adjacent to large-scale mining operations, such as Olympic Dam and Carrapateena and Four Mile / Beverly, all major consumers of energy in SA.

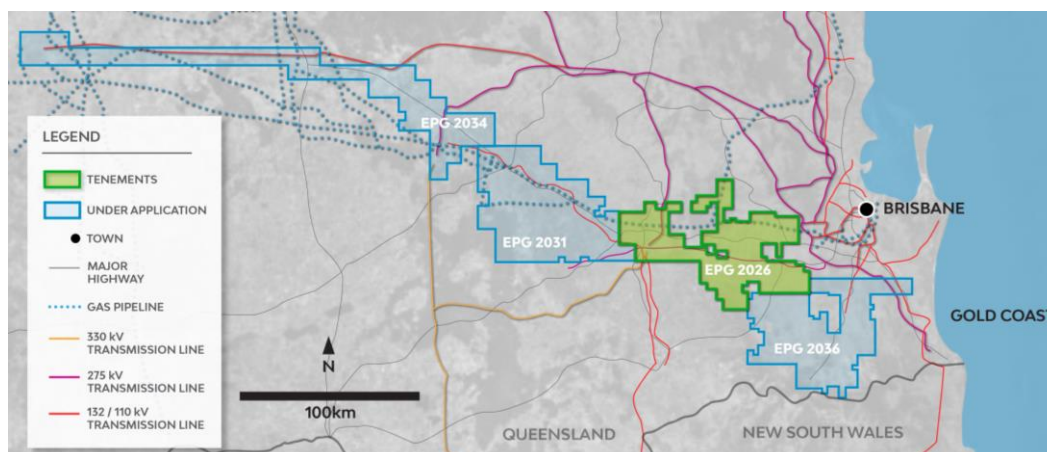


**Figure 1 – South Australian geothermal exploration licences**

<sup>1</sup> <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/011124-infographic-next-generation-technologies-set-the-scene-for-accelerated-geothermal-growth-energy-transition>



In Queensland, Earths Energy has one granted tenement and three tenements under application. EPG2026, located near Brisbane metro, provides potential to access ~400 substations and >75% of Queensland population via existing distribution (subject to regulatory approvals). Tenements under application are located near Brisbane metro and near major industrial activity in the Bowen and Surat Basin mining areas.



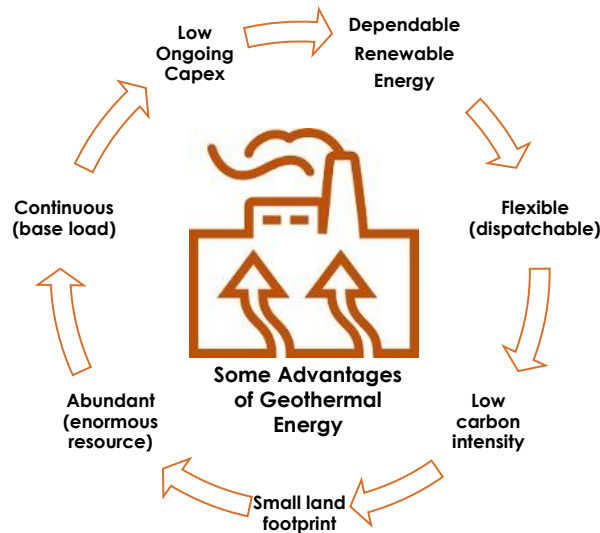
**Figure 2 – Queensland geothermal exploration licences and applications**

The Company will focus on systematically exploring early-stage geothermal targets and developing geothermal resources. This will involve a fit-for-purpose exploration program analysing subsurface geology to identify thermal resource potential at different well depths, undertaking preliminary survey and resource assessments based on offset well data, exploration location definition and exploration drilling. The results from these initial investigations and assessments will determine priority targets for further exploration drilling for geothermal resources.

At the same time, the Company plans to engage in commercial discussions with potential customers, including mining companies in South Australia.

### **Geothermal Energy's Role in a Balanced Renewable Mix**

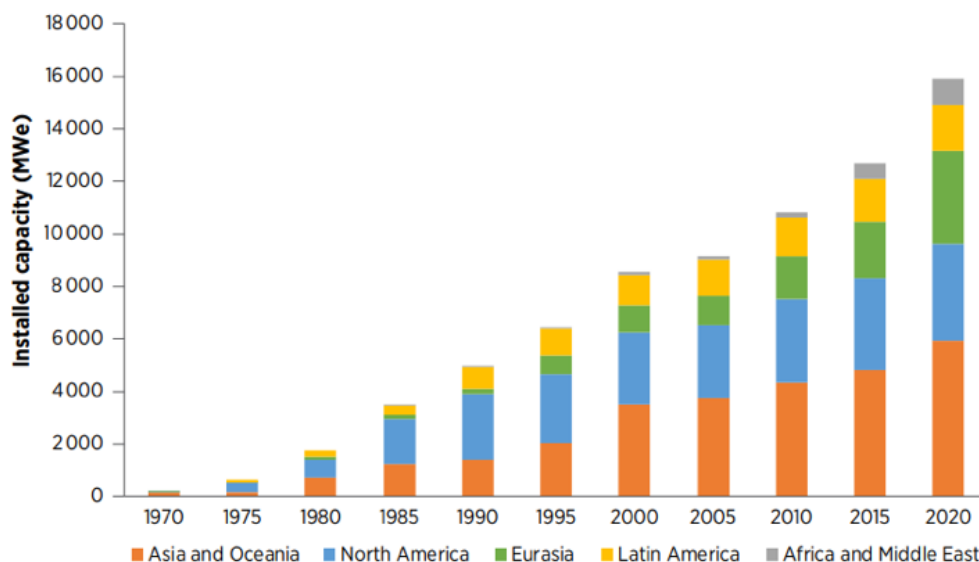
Geothermal energy, with its ability to provide consistent and reliable baseload power, stands out as a significant and sustainable source of renewable energy that can help 'plug the gap' in our energy mix. Unlike variable renewable sources such as wind and solar, geothermal power is not subject to weather conditions or daily fluctuations, instead providing electricity around the clock. This characteristic is particularly valuable for ensuring the stability of the power grid and for providing a steady supply of energy to meet the base level of demand, replacing other base load power such as coal fired generation.



**Figure 3 – Key advantages of Geothermal Energy**

Geothermal energy is by far the least land-use intensive source of electricity generation, with only limited infrastructure on surface compared to other renewable energy sources such as wind or solar which require large surface area. Furthermore, once the initial geothermal wells are drilled, energy can be extracted from the earth for several decades, with no additional capex required except for maintenance and very little operating cost.

The geothermal energy industry has been active globally for over 100 years and geothermal power plants have been installed in 30 countries. As of January 2024, global geothermal power generation capacity stood at 16,335 MWe with 208 MWe capacity installed during 2023<sup>2</sup>.



Source: ThinkGeoEnergy statistics

**Figure 4 – Growth of installed geothermal electricity capacity by region**

<sup>2</sup> <https://www.thinkgeoenergy.com/thinkgeoenergys-top-10-geothermal-countries-2023-power-generation-capacity/>

Geothermal energy is the “potentially largest – and presently the most misunderstood – source of energy in the U.S. and the world today.” said Former U.S. Vice President Al Gore in his book “Our Choice – A plan to solve the climate crisis”.

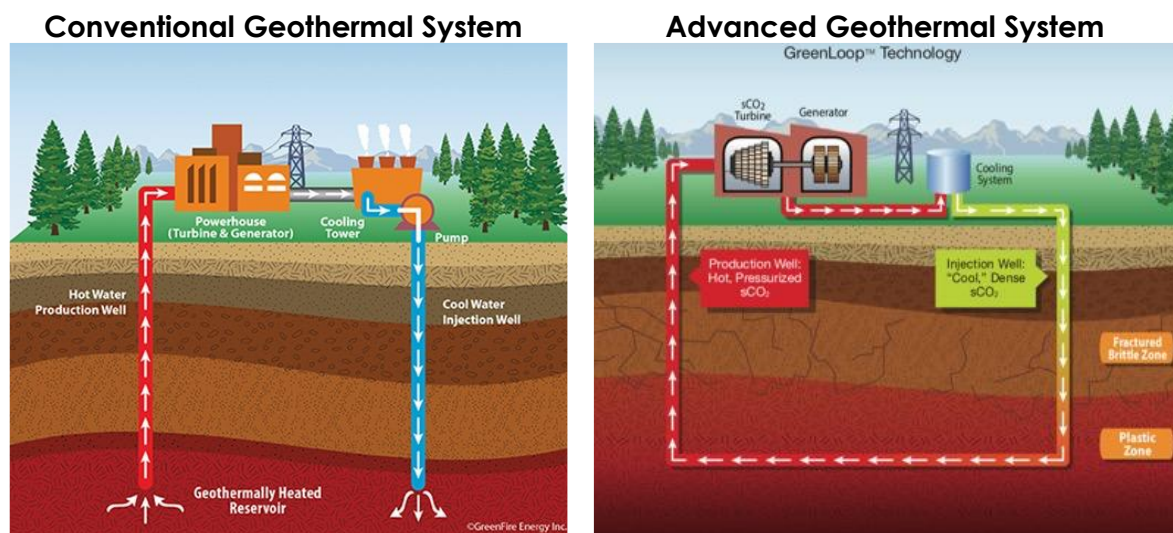
## Technological developments to unlock additional resources

Despite its huge potential, growth over the last decade of geothermal electricity generation has been steady rather than spectacular compared to other renewable sources of energy such as wind or solar.

The development of geothermal power historically was largely confined to hydrothermal sites, shallower resources with high temperatures, naturally occurring water and sufficient rock permeability. However, these resources are only found in specific locations.

Next-generation geothermal technologies such as Advanced Geothermal Systems (AGS) – see Figure 5 - aim to produce cheap and plentiful geothermal energy in areas where natural exploitation was otherwise impossible. This has the potential to unlock geothermal energy for many countries including Australia, where prior efforts to develop conventional geothermal have been unsuccessful.

These next-generation technologies are key to making geothermal applicable in more locations.

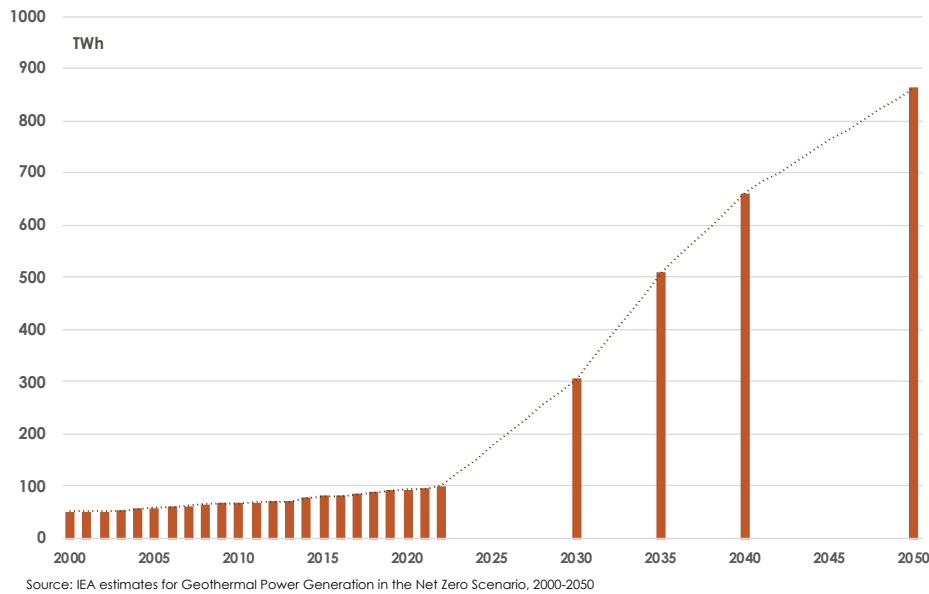


**Figure 5 – Next Generation Geothermal Systems overcome location restrictions<sup>3</sup>**

On the back of these next-gen technologies the International Energy Agency estimates that geothermal derived power generation will increase eight fold between now and 2050 – See Figure 6

<sup>3</sup> Source: Greenfire



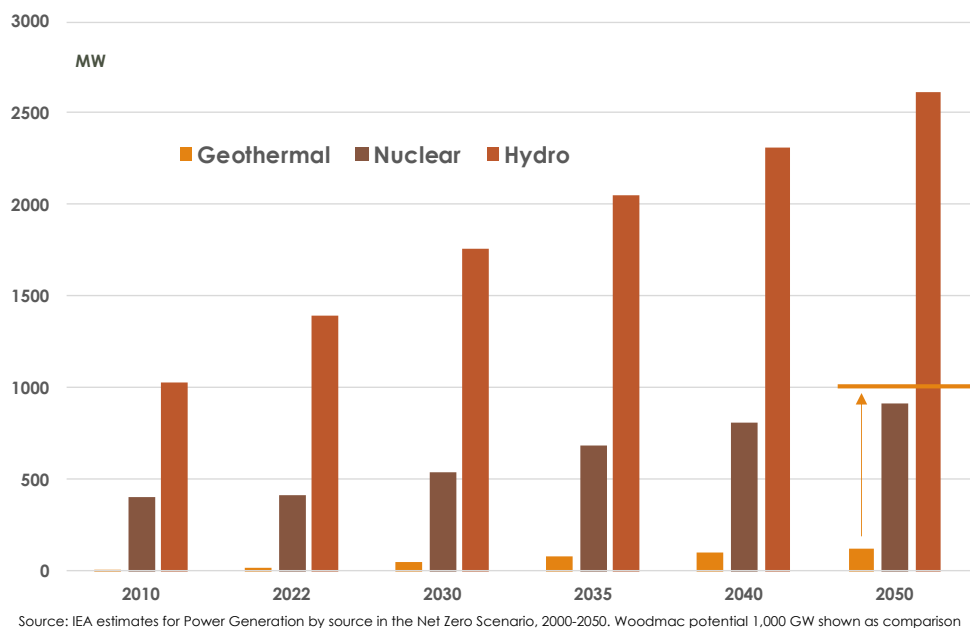


**Figure 6 – IEA projections of geothermal generation**

Independent research firms such as Wood Mackenzie have written that this level of growth may only be the tip of the iceberg:

*“... We think global geothermal capacity has the potential to exceed 1,000 GW by 2050, bigger than either global nuclear or hydro capacity today.”* Wood Mackenzie

Unlocking the ‘location restriction’ and lowering costs has the potential to release geothermal’s huge clean base-load resource. In 2017, the International Renewable Energy Agency reported that the amount of heat within 10 km of the Earth’s surface was estimated to contain 50,000 times more energy than all oil and gas resources worldwide (Shere, 2013).

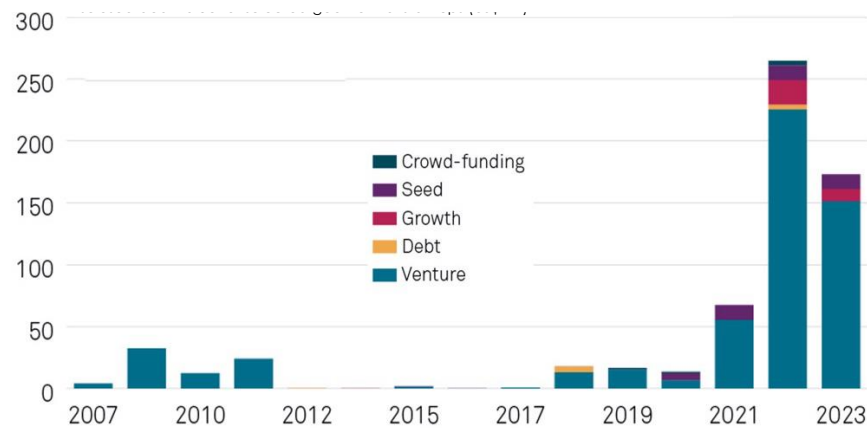


**Figure 7 – Next-gen Geothermal driving down costs could unlock huge upside potential**



More developments and greater scale and investment will likely result in a lowering of costs (as occurred for other renewables) and hence even more demand for geothermal, a virtuous cycle.

Interest in these next-generation geothermal technologies is driving record levels of geothermal drilling and R&D Investment. In just the last 3 years, emerging geothermal technology providers, secured over half a billion US Dollars in early stage funding.



**Figure 8 – Funding for next-gen geothermal start-ups has surged<sup>4</sup>**

Earths Energy intends to be at the forefront of this exciting future for Advanced Geothermal Systems in Australia, becoming a major player in Australia's clean energy revolution.

### **What makes Earths Energy unique – geothermal exposure on the ASX**

Earths Energy is poised to navigate the challenges that have historically impeded geothermal energy development in Australia. Its strategic positioning near existing infrastructure is crucial, as it potentially enables rapid commercialisation by providing access to customers. For instance, in South Australia, Earth Energy's geothermal exploration licenses are close to major existing mining and processing operations, as well as power grids. In Queensland, the Company's tenement is located near Brisbane, with access to the electricity grid on the tenement footprint.

The Company is also benefiting from recent technological advancements such as advanced closed-loop systems, which have made geothermal electricity production more feasible in Australia. These systems allow for the extraction of geothermal energy without the need for natural permeability in the hot rocks, thereby overcoming one of the primary technical barriers faced by traditional geothermal projects in the country. Additionally, the adoption of binary cycle power plants enables electricity generation from medium-temperature resources, further expanding the potential for geothermal development.

Moreover, the shift in government policies and increased funding from both Federal and State Governments, suggests a favourable environment for Earths Energy.

<sup>4</sup> <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/011124-infographic-next-generation-technologies-set-the-scene-for-accelerated-geothermal-growth-energy-transition>



The global geothermal energy sector has experienced a significant upsurge in recent years as nations seek sustainable and reliable energy sources to meet zero carbon emission targets, and Earths Energy stands out as the only geothermal company currently listed on the Australian Securities Exchange (ASX), highlighting its unique position in tapping into this growing market.

## Funding

The Company's cash balance at 31 December 2023 was \$6.024m, following a capital raise of \$6 million.

The Company has a loan facility with Matador Capital of \$500,000 which remains undrawn. Refer to Appendix 5B section 7.6 for further details.

The Company intends to apply the funds raised from the Capital Raising Offer (being \$6,000,000) over the next two years as follows:

Spend Item	Amount of Funds	% of Funds
Corporate costs <sup>5</sup>	\$1,816,486	30.27%
Joint Venture technical services allocation	\$232,138	3.87%
Accounting and support services	\$158,340	2.64%
Geological services	\$480,000	8.0%
Technical subsurface exploration activities	\$283,000	4.72%
HSE Adviser	\$320,000	5.33%
Native title and land access	\$91,500	1.53%
Consultants – Drilling	\$360,000	6.00%
Civil and exploration drilling	\$640,000	10.67%
Engineering	\$80,000	1.33%
HSEQ compliance requirements	\$72,000	1.20%
Title rent and fees	\$300,000	5.00%
Transaction costs	\$340,000	5.67%
Broker fees	\$300,000	5.00%
Working capital <sup>6</sup>	\$526,536	8.78%
<b>TOTAL</b>	<b>\$6,000,000</b>	<b>100%</b>

## Payments to related parties of the entity and their associates

During the Quarter, payments to related parties for directors' fees totalled \$48,000.

Mr Grant Davey, who is a Director of the Company, is a director and shareholder of Matador Capital Pty Ltd ("Matador Capital"). The Company makes payments to Matador Capital under Shared Services and Office Use Agreements in which Matador Capital provides office space, office administration services, bookkeeping and accounting services and IT hardware & infrastructure to the Company. The services provided by Matador Capital are recovered from the Company on a cost-plus basis and totalled \$532.

<sup>5</sup> Comprises of general administration expenses, including director fees, audit fees, insurance, legal, ASX fees, investor relations costs, share registry costs, occupancy costs, accounting and book-keeping costs.

<sup>6</sup> General working capital including, but not limited to, expenditure in respect to the Company undertaking due diligence investigations on potential additional complementary project opportunities





**Authorised for release by Earths Energy's Board of Directors.**

## **ENDS**

To learn more about the Company, please visit [www.ee1.com.au](http://www.ee1.com.au), or contact:

Matt Kay  
Managing Director  
0401 988 824

Aiden Bradley  
NWR Communications  
0414 348 666

## **About Earths Energy**

Earths Energy has entered into binding Sale Agreements to acquire 84% interest in Volt Geothermal Pty Ltd ("Volt") and Within Energy Pty Ltd ("Within"), who hold geothermal projects in South Australia and Queensland, respectively (collectively the "Projects"). The Projects comprise of prospective geothermal exploration licences, surrounded by key existing infrastructure for electricity generation, including powerlines and sub power stations. The Company plans to focus on systematically exploring early-stage geothermal targets and developing geothermal resources at the Projects. This will involve a fit-for-purpose exploration programme analysing subsurface geology to identify thermal resource potential at different well depths, undertaking preliminary survey and resource assessments based on offset well data, exploration location definition and exploration drilling. This will determine priority targets for exploration drilling for geothermal resources.

## **Board & Management**

**Grant Davey**  
Executive Director

**Matt Kay**  
Managing Director

**Chris Bath**  
Director and Chief  
Financial Officer

**David Wheeler**  
Non-Executive  
Director

**Dr Lawrence Meckel**  
Head of Subsurface

## Appendix 5B

### Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Earths Energy Limited (Formerly Cradle Resources Limited)

ABN

60 149 637 016

Quarter ended ("current quarter")

31 December 2023

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
<b>1.</b>	<b>Cash flows from operating activities</b>		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	-	-
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(48)	(60)
	(e) administration and corporate costs	(397)	(762)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	1	3
1.5	Interest and other costs of finance paid	-	(1)
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material)	-	-
<b>1.9</b>	<b>Net cash from / (used in) operating activities</b>	<b>(444)</b>	<b>(820)</b>

<b>2.</b>	<b>Cash flows from investing activities</b>		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation	-	-
	(e) investments	-	-
	(f) other non-current assets	-	-

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (6 months) \$A'000</b>
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>-</b>	<b>-</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	850
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	(6)	(11)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (receipts from share subscriptions)	6,000	6,000
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>5,994</b>	<b>6,839</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	474	5
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(444)	(820)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	5,994	6,839

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	<b>Cash and cash equivalents at end of period</b>	<b>6,024</b>	<b>6,024</b>

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	6,024	474
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>6,024</b>	<b>474</b>

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	50
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

<b>7.</b>	<b>Financing facilities</b> <i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
7.1	Loan facilities	500	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	<b>Total financing facilities</b>	500	-
7.5	<b>Unused financing facilities available at quarter end</b>		500
7.6	<p>Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.</p> <ul style="list-style-type: none"> <li>Facility Limit of \$500,000</li> <li>Lender: Davey Management (Aus) Pty Ltd</li> <li>Interest rate of 8%</li> <li>Limited recourse - The recourse of the Lender against the Borrower is limited to the assets of the Borrower after payment of all unsubordinated creditors</li> <li>Subordination - the repayment of the total outstanding amount shall be subordinated and postponed and made subject to all debts, claims, demands, rights and causes of action of all unsubordinated creditors</li> <li>Repayment date is 31 October 2024.</li> </ul>		

<b>8.</b>	<b>Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1	Net cash from / (used in) operating activities (item 1.9)	(444)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(444)
8.4	Cash and cash equivalents at quarter end (item 4.6)	6,024
8.5	Unused finance facilities available at quarter end (item 7.5)	500
8.6	Total available funding (item 8.4 + item 8.5)	6,524
8.7	<b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	14.7
<p><i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i></p>		
8.8	<p>If item 8.7 is less than 2 quarters, please provide answers to the following questions:</p> <p>8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?</p> <p>Answer: N/A</p>	



## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: N/A

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: N/A

*Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.*

## Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 31 January 2024

Authorised by: **Board of Earths Energy Limited**  
(Name of body or officer authorising release – see note 4)

## Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.